REMARKS

Claims 1, 6, 7 and 9 have been amended to further recite the invention without the intention of narrowing the scope of any of the claims. The amendments of those claims merely further confirm what has already been argued with respect to and understood to be meant by those claims - they do not present new issues. Indeed, Applicants have amended the currently pending claims in order to expedite prosecution and do not, by this amendment, intend to abandon subject matter of the claims as originally filed or later presented, and reserve the right to pursue such subject matter in a continuing application. No new matter has been added. Claims 1-9 and 11-20 are pending in this patent application. Reconsideration of the rejections in view of the remarks below is requested.

Entry of the Amendment is proper under 37 C.F.R. §1.116 as the amendments: (a) place the application in condition for allowance for the reasons discussed herein; (b) do not present any new issues that would require further consideration and/or search as the amendments merely amplify issues discussed throughout the prosecution; (c) do not present any additional claims without canceling a corresponding number of claims; (d) place the application in better form for appeal, should an appeal be necessary; and (e) were not made earlier because they are made in response to the points first presented in the final Office Action. Entry of the Amendment is thus respectfully requested along with withdrawal of the final Office Action.

Examiner's Response to Applicant's Arguments of February 21, 2006

In disagreeing with Applicants' arguments, the Examiner states that "the reference of Kamon shows determining aberration of a projection system of a lithographic apparatus (figs. 1 and 2) and further by elimination of aberrations (col. 5, lines 45-65)." Applicants respectfully submit that does not answer at all how Kamon discloses, teaches or suggests the pending claims.

While the cited portions of Kamon disclose an aberration estimating method for an optical system, the cited portions of Kamon fail to disclose, teach or suggest the specific methods of determining aberration of projection system as claimed by Applicants. Examiner's statement simply ignores the specific claim language of Applicants' claims.

With respect to the independent claims, Applicants submit again that the cited

portions of Kamon fail to disclose, teach or suggest projecting a second test pattern that comprises filtering to select particular radiation paths through the projection system of the second test pattern. Clearly, Examiner's statement above does not answer that – indeed, claim 1, 6 and 7 do not even require "elimination of aberrations" and thus that part of the statement is wholly irrelevant to those claims. Moreover, Applicants disagree that the aberration eliminating filter 13 disclosed in col. 5, lines 28-38 of Kamon corresponds to that claim language. The aberration eliminating filter 13 is not used during Kamon's aberration estimating method. Rather, the aberration eliminating filter 13 is used subsequent to such estimation and is selected based on such estimation. See, e.g., col. 5, lines 59-64. Hence, Kamon does not disclose, teach or suggest using the aberration eliminating filter 13 to filter select particular radiation paths through the projection system of the second test pattern as part of projecting the second test pattern and thus does not disclose, teach or suggest projecting a second test pattern that comprises filtering to select particular radiation paths through the projection system of the second test pattern.

Moreover, there is no disclosure, suggestion or teaching in the cited portions of Kamon even that the aberration eliminating filter 13 is configured to select particular radiation paths through the projection system. Rather, the aberration eliminating filter 13 is disclosed to correct aberrations of the projected patterned beam. In particular, Kamon discloses the filter as "provided with a transparent substrate and a wavefront regulating (or adjusting) transparent multi-layer film formed on at least one principal plane." Kamon, col. 3, lines 9-12. Thus, the Kamon filter does not select particular radiation paths through the projection system but rather merely adjusts the wavefront to correct for aberrations, the radiation going along all the same paths through the projection system as if the aberration eliminating filter 13 were not there.

Accordingly, Applicant respectfully maintains that the cited portions of Kamon fail to disclose, teach or suggest the pending claims and that the secondary reference Taniguchi does not overcome the shortcomings of Kamon.

Rejections of Claims 1-3, 18 and 19 under 35 U.S.C §102(e) and Claims 4-9, 11-17 and 20 under 35 U.S.C. §103(a)

The Office Action rejected claims 1-3, 18 and 19 under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. US 6,245,470 to Kamon ("Kamon"). Applicants respectfully

traverse the rejection, without prejudice.

Applicants respectfully submit that the cited portions of Kamon at least fail to disclose, teach or suggest a method of determining aberration of a projection system of a lithographic apparatus wherein, *inter alia*, projecting a second test pattern comprises filtering to select particular radiation paths through the projection system of the second test pattern as recited in independent claim 1 and a device manufacturing method comprising, *inter alia*, projecting a second test pattern comprises filtering to select particular radiation paths through the projection system of the second test pattern as recited in independent claim 9.

The Examiner refers to col. 5, lines 28-38 of Kamon as disclosing "wherein projecting the second test pattern comprises filtering to select particular radiation paths through the projection system." Respectfully, Applicants submit that the cited portions of Kamon merely disclose that the aberration eliminating filter 13 is inserted into the projection system after the one or more aberration estimating patterns in Kamon are exposed. See Kamon, col. 5, lines 48-65. Thus, the cited portions of Kamon fail to disclose, teach or suggest projecting a test pattern that comprises filtering to select particular radiation paths through the projection system of the second test pattern. Moreover, the cited portions of Kamon fail to disclose, teach or suggest that the aberration eliminating filter 13 is configured to select particular radiation paths through the projection system.

Therefore, for at least the above reasons, the cited portions of Kamon fail to disclose, teach or suggest all the features recited by claims 1 and 9. Claims 2 and 3 depend from claim 1 and are, therefore, patentable for at least the same reasons provided above related to claim 1 and for the additional features recited therein. Claims 18 and 19 depend from claim 9 and are, therefore, patentable for at least the same reasons provided above related to claim 9 and for the additional features recited therein. As a result, Applicants respectfully submit that the rejection under 35 U.S.C. §102(b) of claims 1-3, 18 and 19 in view of Kamon should be withdrawn and the claims allowed.

The Office Action rejected claims 4-9, 11-17 and 20 under 35 U.S.C. §103 as being obvious in view of Kamon and further in view of U.S. Patent No. 6,304,317 to Taniguchi et al. ("Taniguchi et al."). Applicants respectfully traverse the rejection, without prejudice.

Applicants respectfully submit that, as discussed above, the cited portions of Kamon fail to disclose, teach or suggest independent claims 1 and 9 and that the cited portions of Taniguchi et al. fail to overcome the shortcomings of Kamon. The cited portions of Taniguchi et al., for example, fail to disclose, teach or suggest projecting a reference test pattern in the

lithographic apparatus, projecting a second test pattern in the lithographic apparatus, and measuring relative displacements between items in resulting images of said reference test pattern and said second test pattern, wherein projecting the second test pattern comprises filtering to select particular radiation paths through the projection system of the second test pattern as recited in claim 1. Claims 4, 5 and 17 depend from claim 1 and are, therefore, patentable for at least the same reasons provided above related to claim 1 and for the additional features recited therein. Similarly, the cited portions of Taniguchi et al. fail to disclose, teach or suggest projecting a reference test pattern, projecting a second test pattern, the projecting of the second test pattern comprising filtering to select particular radiation paths through the projection system of the second test pattern, and measuring relative displacements between items in resulting images of the reference test pattern and the second test pattern as recited in claim 9. Claim 20 depends from claim 9 and is, therefore, patentable for at least the same reasons provided above related to claim 9 and for the additional features recited therein.

Further, Applicants submit that the teachings of the cited portions of Kamon, Taniguchi et al., or the combination thereof do not render independent claims 6 and 7 obvious at least because the cited portions of Kamon fail to disclose, teach or suggest a method of determining aberration of a projection system of a lithographic apparatus wherein, *inter alia*, projecting a second test pattern comprises filtering to select particular radiation paths through the projection system of the second test pattern as recited in independent claims 6 and 7. As discussed above with respect to independent claim 1, the cited portions of Kamon merely disclose that the aberration eliminating filter 13 is inserted into the projection system after the one or more aberration estimating patterns in Kamon are exposed. See Kamon, col. 5, lines 48-65. Thus, the cited portions of Kamon fail to disclose, teach or suggest projecting a test pattern that comprises filtering to select particular radiation paths through the projection system of the second test pattern. Moreover, the cited portions of Kamon fail to disclose, teach or suggest that the aberration eliminating filter 13 is configured to select particular radiation paths through the projection system.

The cited portions of Taniguchi et al. fail to overcome the shortcomings of Kamon with respect to independent claims 6 and 7 at least because the cited portions of Taniguchi et al., for example, fail to disclose, teach or suggest projecting a reference test pattern in the lithographic apparatus, projecting a second test pattern in the lithographic apparatus, measuring relative displacements between items in resulting images of said reference test

pattern and said second test pattern, wherein projecting a second test pattern comprises filtering to select particular radiation paths through the projection system of the second test pattern as recited in claims 6 and 7.

Claims 11-14 depend from claim 6 and are, therefore, patentable for at least the same reasons provided above related to claim 6 and for the additional features recited therein. Claims 8, 15 and 16 depend from claim 7 and are, therefore, patentable for at least the same reasons provided above related to claim 7 and for the additional features recited therein.

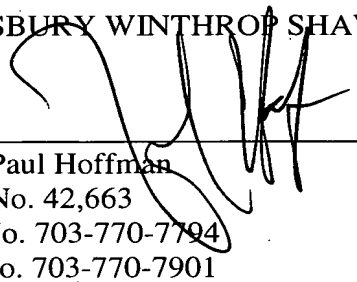
Therefore, for at least the above reasons, Kamon, Taniguchi et al., and the combination thereof, fail to disclose, teach or suggest all the features recited by claims 4-9, 11-17 and 20. As a result, Applicants respectfully submit that the rejection under 35 U.S.C. §103 of claims 4-9, 11-17 and 20 in view of Kamon and Taniguchi et al. should be withdrawn and the claims allowed.

All objections and rejections having been addressed, it is respectfully submitted that the present application is in condition for allowance. If questions relating to patentability remain, the Examiner is invited to contact the undersigned to discuss them.

Should any fees be due, please charge them to our deposit account no. 03-3975, under our order no. 081468/0308899. The Commissioner for Patents is also authorized to credit any over payments to the above-referenced deposit account.

Respectfully submitted,

PILLSBURY WINTHROP SHAW PITTMAN LLP



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